IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Gyula Hadlaczky, *et al.*	Art Unit	: 1632
Serial No.	: 09/836,911	Examiner	: Ram R. Shukla
Filed	: April 17, 2001	Conf. No.	: 7763
Cust. No.	: 20985		
Title	: ARTIFICIAL CHROMOSOMES, USES THEREOF AND METHODS FOR PREPARING ARTIFICIAL CHROMOSOMES		

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT IN ACCORDANCE WITH 37 C.F.R. §§1.97-1.98

Dear Sir:

This Supplemental Information Disclosure Statement is filed prior to receipt of a first Office Action on the merits of the Request for Continued Examination of the above-captioned application. Thus, a fee for filing this statement should not be due. If, however, it is determined that a fee is due, any fees that may be due in connection with filing this paper may be charged to Deposit Account No. 06-1050.

In accordance with the duty of disclosure imposed by 37 C.F.R. §1.56 to inform the Patent Office of all references known by Applicant or Applicant's representative that may be material to the examination of the subject application, Applicant's representative hereby provides this Supplemental Information Disclosure Statement that is prepared in accordance with 37 C.F.R. §§1.97-1.98. Form PTO-1449 (2 pages) and copies of the cited references are provided herewith in connection with the above-captioned application.

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I hereby certify that this paper is being deposited with the United States Postal "Express Mail Post Office to Addressee" Service under 37 CFR §1.10 on the date indicated above and is addressed to: Commissioner for Patents, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA, 22313-1450.

Stephanie L. Seidman

The documents listed on the Form PTO-1449 are in the English language. Hence, in accordance with the requirements of 37 C.F.R. §1.98, as amended effective March 16, 1992, no further explanation of the listed items is necessary.

The Examiner's attention is directed to the cited reference Oberle *et al.* (*Biochimica et Biophysica Acta* (2004) 1676:223-230). Oberle *et al.* describes methods for delivering artificial chromosome expression systems (ACEs) to cells. Specifically, Oberle *et al.* demonstrates that when cells are treated with ultrasound energy and the cationic lipid SAINT-2 or DOTAP prior to contacting them with ACEs, the ACEs are delivered into the cells. Oberle *et al.* states that, prior to its publication, there was no suitable procedure for delivering ACEs into cells because the size of the ACEs was too large to allow internalization of ACEs complexed with cationic lipids or polymers (*see, e.g.*, Abstract at page 223 and page 224, col. 1, para. 3). Oberle *et al.* further states that incubation of ACEs with cationic lipids such as SAINT-2 and DOTAP to prepare ACEs/lipid complexes leads to partial unraveling of the ACEs with a loss of their condensed structure (*see* page 225, col. 1, para. 2). Oberle *et al.* does not provide any data to support these statements.

The instant application, however, describes the introduction of artificial chromosomes, including ACEs, into cells by lipid-mediated transfection (*see, e.g.*, pg. 10, line 25 to pg. 11, line 5; pg. 11, lines 6-27; pg. 23, line 18 to pg. 24, line 8; pg. 33, line 19 to pg. 34, line 7; pg. 48, lines 11-29; pg. 49, line 29 to pg. 50, line 12; Example 4, beginning at pg. 83; and Example 14 beginning at pg. 168), as well as in U.S. Patent No. 6,025,155, which is a parent application of the instant application.

The above-captioned application designates two inventors Gyula Hadlaczky and Aladar A. Szalay and ultimately two assignees, Biological Research Center of the Hungarian Academy of Sciences and Chromos Molecular Systems, Inc. Gyula Hadlaczky assigned to Biological Research Center of the Hungarian Academy of Sciences. Aladar A. Szalay assigned to Loma Linda University and American Gene Therapy. Loma Linda University and American Gene Therapy assigned to Chromos Molecular Systems, Inc. Thus, each of the co-pending applications and the above-captioned application has joint inventors and two assignees

Further to the last Supplemental Information Disclosure Statement, filed July 29, 2003, U.S. application Serial No. 09/096,648 has issued as U.S. Patent No. 6,743,967. Applicant also makes known to the Examiner the following U.S. applications which are commonly owned and/or have one or more inventors in common:

U.S.S.N.	Filing Date	Docket No. (Previous)
10/782,129	02/18/04	17084-004016 (24601-402O)
10/808,689	03/24/04	17084-004017 (24601-402P)

Although these documents are made known to the Patent and Trademark Office in compliance with Applicant's duty of disclosure, such disclosure is not to be construed as an admission by Applicant or Applicant's representative that any of the references is effective as prior art against the subject application. In accordance with 37 C.F.R. 1.97(h), the filing of this Supplemental Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. 1.56(b) exists.

Applicant respectfully requests that the Examiner review the foregoing references and make them of record in the file history of the above-captioned application.

Respectfully submitted,

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Attorney Docket No. 17084-004010/402I
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Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 17084-004010/402I	Application No. 09/836,911
List of Patents and Publications for Applicant's Information Disclosure Statement (37 CFR §1.98(b))		Applicant Gyula Hadlaczky, *et al.*	
		Filing Date April 17, 2001	Group Art Unit 1632

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	5695967	12/9/1997	Van Bokkelen *et al.*	435	91.1	6/7/1995
	AB						

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation Yes	Translation No
	AC	NONE						
	AD							

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	AE	Adam *et al.*, "Retrofitting YACs for direct DNA transfer into plant cells", *Plant Journal 11*:1349-1358 (1997)
	AF	Asahara, T., "Stem cell therapy and gene transfer for regeneration", *Gene Ther. 7(6)*:451-457 (2000)
	AG	Avramova, "Heterochromatin in Animals and Plants", *Plant Physiology 129*:40-49 (2000)
	AH	Christman *et al.*, "Amplification of expression of hepatitis B surface antigen in 3T3 cells cotransfected with a dominant-acting gene and cloned viral DNA", *Proc. Natl. Acad. Sci. U.S.A. 79*:1815-1819 (1982)
	AI	Copenhaver *et al.*, "Genetic definition and sequence analysis of Arabidopsis centromeres", *Science 286*:2468-2474 (1999)
	AJ	Fehilly *et al.*, "Interspecific chimaerism between sheep and goat", *Nature 307*:634-636 (1984)
	AK	Gage, F.H., "Cell therapy", *Nature 392*:18-24 (1998)
	AL	Hemann *et al.*, "High-copy expression vector based on amplification-promoting sequences", *DNA Cell Biol. 13(4)*:437-445 (1994)
	AM	Lehninger, Biochemistry, 2nd edition, Worth Publishers, New York, p.35 and p.864 (1976)
	AN	Lopes *et al.*, "Mechanism of high-copy-number integration of pMIRY-type vectors into the ribosomal DNA of Saccharomyces cerevisiae", *Gene 105*:83-90 (1991)
	AO	Meyer *et al.*, "Inhibition of HIV-1 replication by a high-copy-number vector expressing antisense RNA for reverse transcriptase", *Gene 129*:263-268 (1993)
	AP	Milbrandt *et al.*, "Amplification of a cloned Chinese hamster dihydrofolate reductase gene after transfer into a dihydrofolate reductase-deficient cell line", *Mol. Cell. Biol. 3*:1274-1282 (1983)
	AQ	Monteith DP, Leung JD, Borowski AH, Co DO, Praznovszky T, Jirik FR, Hadlaczky G, Perez CF, "Pronuclear microinjection of purified artificial chromosomes for generation of transgenic mice: pick-and-inject technique," *Method Mol. Biol. 240*:227-42 (2004)
	AR	Oberle *et al.*, "Efficient transfer of chromosome-based DNA constructs into mammalian cells," *Biochimica et Biophysica Acta 1676*: 223-30 (2004)

Examiner Signature	Date Considered

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 17084-004010/402I	Application No. 09/836,911
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		Filing Date April 17, 2001	Group Art Unit 1632

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	AQ	Perez C, de Jong G, Dryer J, Hadlaczky G, "Satellite DNA-based artificial chromosomes - chromosomal vectors", *Trends in Biotechnology 18*:402-403 (2000)
	AR	Raven *et al.*, "The Classification of Living Things", in Botany, pages 171-185, Worth Publishers, New York, N.Y. (1992)
	AS	Samstein a*nd Platt, "Physiologic and immunologic hurdles to xenotransplantation"*, J. Am. Soc. Nephrol. 12:182-193 (2001)
	AT	Shen *et al.*, "A structurally defined mini-chromosome vector for the mouse germ line", *Current Biology 10*:31-34 (2000)
	AU	Stolzenburg *et al.*, "Structural homologies and functional similarities between mammalian origins of replication and amplification promoting sequences", *Chromosoma 103*:209-214 (1994)
	AV	Szakal B, Cserpan I, Csonka E, Monostori E, Udvardy A, Hadlaczky G, "Cloning, characterization and localization of Chinese hamster HP1 isoforms", *Chromosome Res. 12(5)*:483-93 (2004)
	AW	Van Beusechem and Valerio, "Gene transfer into hematopoietic stem cells of nonhuman primates", *Hum. Gene Ther. 7(14)*:1649-1668 (1996)
	AX	Wegner *et al.*, "Cis-acting sequences from mouse rDNA promote plasmid DNA amplification and persistence in mouse cells: implication of HMG-I in their function", *Nucl. Acids. Res. 17(23)*:9909-9932 (1989)
	AY	Wegner *et al.*, "An amplification-promoting sequence from mouse genomic DNA: interaction with a trans-acting factor that also affects gene expression", *DNA Cell Biol. 9(5)*:311-321 (1990)
	AZ	Willard, "Artificial Chromosomes Coming to Life", *Science 290*:1308-1309 (2000)
	BA	Zabel *et al.*, "Towards the construction of artificial chromosomes for tomato", *NATO ASI Series, Series A: Life Sciences (Mol. Form Funct. Plant Genome) 83*:609-624 (1985)

Examiner Signature	Date Considered

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.